

# Michigan Department of Community Health Division of Occupational and Environmental Epidemiology

## Lumex RA-915+ Mercury Analyzer Start-Up and Use Procedures

1. Open the front end cover flap of the cloth case and attach the metal hose coupling into the near center opening, turning it clockwise until it locks in place.
2. Push the red **Power** switch to the “on” position. The screen on the top of the analyzer will display the Lumex name.
3. Push the **Enter** key, the screen will display a menu, and there will be an asterisk (\*) at the top left hand side of the screen.
4. Ignite the ignition lamp by pushing the **Lamp Ignition Switch** button located underneath the battery status lights and holding it for 3 seconds or more. The asterisk will disappear from the screen when the lamp is ignited.
5. Wait 5 minutes for the machine to warm up and acclimate to the room temperature in which you will be using it.
6. Use the **Down arrow** key to select the menu line for **Test** and then press the **Enter** key.
7. After the machine runs a baseline test it will ask you to enter the test cell. You do this by reaching inside the analyzer’s cloth case and turning the **Rotary selector switch** at the rear side of the box counterclockwise to the “test” position. Rotate it back and forth between positions a few times and then leave it set at the “test” position. Then push the **Enter** key and the machine will run a 10 second test and report the results at the lower left of the screen.
8. The R value will be displayed as **R(%)= \_\_**. The number to the right of the = must be 25 or less for the machine to be considered functioning properly. If **R** is greater than 25, wait 10 minutes with the machine running in that mode and it will likely acclimate to acceptable level. Run the test again.
9. When the **R** = less than 25, press the **Escape** key and the machine will direct you to remove the test cell. Turn the rotary switch clockwise and press the **Enter** key.
10. At the main menu, select the **On Stream** line and press the **Enter** key. The machine will run a short baseline test and then start reporting real-time mercury level readings in units of **nanograms per cubic meter of air**. Try to keep the

bottom of the machine parallel to the ground at all times during sampling. Do not set the machine down on any surfaces suspected of being contaminated.

11. The number displayed at the top right is the most recent sampling result. The number below it is the average of the last 10-second interval of sampling. The bottom number is the countdown of seconds in the current 10-second interval. When you are finished sampling push the escape key to stop the airflow and turn off the machine with the power switch. Store the Lumex in its hard case with the display screen facing up.
12. If you have any questions or encounter problems please contact the Division of Environmental and Occupational Epidemiology at **1-800-648-6942**

- Please be careful with this device
- Avoid sticking the end of the hose into direct contact with dust, dirt or mercury
- Do not allow the rechargeable batteries to become or remain completely discharged. The port for the machine's transformer plug is beneath the red power switch.
- Please keep the Lumex secure from extreme temperature, damage, and theft
- Please return it promptly so others may use it
- Thanks for your cooperation